

Title (en)  
HEAT TRACE SYSTEM INCLUDING HYBRID COMPOSITE INSULATION

Title (de)  
WÄRMESPURSYSTEM MIT EINER HYBRID-VERBUNDISOLIERUNG

Title (fr)  
SYSTÈME DE TRAÇAGE ÉLECTRIQUE COMPORTANT UNE ISOLATION COMPOSITE HYBRIDE

Publication  
**EP 2616605 A4 20140903 (EN)**

Application  
**EP 11825955 A 20110915**

Priority  
• US 38325810 P 20100915  
• US 2011051799 W 20110915

Abstract (en)  
[origin: WO2012037374A1] A fluid pipeline has a first end and a second end. An elongated heat trace element comprised of first and second heat tubes is aligned and coupled to at least a portion of an outer surface of the fluid pipeline. The outer surface of fluid pipeline carries a first insulation material covering a first portion of the outer surface. The outer surface of the fluid pipeline further carries a second insulation material covering a second portion of the outer surface and wherein the second portion of the outer surface is different than the first portion of the outer surface. The first and second insulation materials are configured to cover the outer surface of the fluid pipeline. The fluid pipeline further comprises a third insulation material carried over a second outer surface defined by the cooperation of the first and second insulation materials.

IPC 8 full level  
**E04C 1/00** (2006.01); **F16L 53/32** (2018.01); **F16L 53/30** (2018.01); **F16L 53/35** (2018.01); **F16L 53/38** (2018.01); **F16L 59/02** (2006.01)

CPC (source: EP KR US)  
**F16L 53/30** (2018.01 - EP KR US); **F16L 53/32** (2018.01 - EP US); **F16L 53/35** (2018.01 - EP US); **F16L 53/38** (2018.01 - EP US);  
**F16L 59/029** (2013.01 - EP KR US); **Y10T 137/6416** (2015.04 - EP US)

Citation (search report)  
• [XY] US 3151633 A 19641006 - SHUMAN EVERETT C  
• [XY] US 5192039 A 19930309 - WILLIAMS ROBERT O [US]  
• [XY] US 2009205737 A1 20090820 - DINON JOHN L [US], et al  
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• [Y] US 2009293350 A1 20091203 - KANIA BRUCE G [US], et al  
• See also references of WO 2012037374A1

Designated contracting state (EPC)  
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**WO 2012037374 A1 20120322**; BR 112013006285 A2 20170704; CA 2811549 A1 20120322; CA 2811549 C 20181023;  
CL 2013000700 A1 20140307; CN 103282588 A 20130904; EP 2616605 A1 20130724; EP 2616605 A4 20140903;  
KR 20130118869 A 20131030; RU 2013116744 A 20141020; RU 2598500 C2 20160927; US 2013248013 A1 20130926;  
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